

Page 1

Tuesday, January 26, 2016 3:18:58 PM

Reference:

Stop *NR2*

100		0.00		DAS 44 9-89	16/03/02
100	BAND SAW			30	Ø
Bandsaw	Memo	0.00			
Jeaspa Bandsaw	Cut blanks: 0.750" x 0.375" x 3.750" long				
110		0.00		DAS 44 9-89	16/03/03
110	HAAS CNC VERTICAL MACHINING #1			30	Ø
HAAS 1	Memo	0.00			
HAAS CNC vertical machine #1	Machine as per Folio FA550 and Dwg D2872Identify as D2872-3 Dwg Rev A Folio Rev A				
120		0.00		DAS 44 9-89	16/03/03
120	QC2- Inspect parts off machine FAI/FAIB			30	Ø
QC	Memo	0.00			
Quality Control					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐								
Misidentified	☐	Past Due	☐	OTHER :							

Work Order ID 141028

Tuesday, January 26, 2016 3:18:58 PM

141028

Page 2

Item ID: D2872-043 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Nut Plate Assembly
 Start Date: 1/26/2016 Start Qty: 30.00 ***30*** Cust Item ID:
 Required Date: 1/26/2016 Req'd Qty: 30.00 ***30*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC8- Inspect parts - second check	0.00							
130									
QC	Memo	0.00							2/16/3-4
Quality Control									
140	Small Fab	0.00							
140									
Small Fab	Memo	0.00							30x
Small Fab	1-Deburr 2- C'sink as per Dwg D2872								16/03/07
150	QC5- Inspect part completeness to step on W/O	0.00							
150									
QC	Memo	0.00							30
Quality Control									DAS 38 9-89 MAR 07 2016

DAS
36
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
		OTHER : ☐							

141028

Tuesday, January 26, 2016 3:18:58 PM

N900040100

Setup Start *NS1*

Stop ***NS2***

30

30

Reference:

Run Start *NR1*

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

160

Chemical Conversion Coat per QSI005 4.1

0.00

160

HandFinish

Memo

0.00

Hand Finishing

170

QC3- Inspect Part Finish

0.00

170

QC

Memo

0.00

Quality Control

180

Small Fab

0.00

180

Small Fab

Memo

0.00

Small Fab

1-Assemble as per Dwg D2872 2-Identify as D2872-043

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY																																																											
☐ Environment	☐ Design	☐ Doc/Data	☐ Equip/Tooling	☐ Handling/Pre	☐ Material	☐ Internal Transport	☐ Tribal Knowledge	☐ LOA	☐ Substation	☐ Past Expiry Date	☐ Misidentified	☐ No Re-verification	☐ Operator	☐ Offset/Setup	☐ Supplier	☐ Training	☐ Use for Testing	☐ Poor Information	☐ Rushing	☐ Product Improvement	☐ Process Improvement	☐ Manufacturing Process	☐ Past Due	☐ Pressure/Forced	☐ Bending	☐ Centre Not Concentric	☐ Cracks	☐ Crimp/Kink/Ripple/Wave	☐ Cuffs	☐ Crushing	☐ Heat Treat	☐ Wave/Twist in Tube	☐ Marks/Chatter	☐ Temperature/Cure	☐ Set-up	☐ BOM/Route	☐ Broken/Damage/Defect	☐ Inspection Incomplete/Unqualified	☐ Contamination	☐ Countersink	☐ Cut Too Short	☐ Instructions Incomplete/Unclear	☐ Drill Holes	☐ Power Loss/Surge	☐ Folio/Program	☐ Grain	☐ Weld	☐ Wrong Stock Pulled	☐ Out of Sequence	☐ Off-set	☐ Mislabeled	☐ Fit/Function	☐ Misaligned/off center	☐ Positioned Wrong	☐ Outside Dimensions	☐ Over/Under tolerance	☐ Part Incorrect	☐ Part Lost/Missing	☐ Part Moved	☐ Drawing	☐ Finish	☐ Misread	☐ Turning Sequence
☐ OTHER : _____																																																															

Work Order ID 141028

Tuesday, January 26, 2016 3:18:58 PM

141028

Page 4

Item ID: D2872-043 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Nut Plate Assembly
 Start Date: 1/26/2016 Start Qty: 30.00 ***30*** Cust Item ID:
 Required Date: 1/26/2016 Req'd Qty: 30.00 ***30*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC5- Inspect part completeness to step on W/O	0.00							DAS 38 9-88
190						30			MAR 09 2016
QC	Memo	0.00							
Quality Control									
200	Identify as per dwg & Stock Location: <u>SDB</u>	0.00							
200						30			DAS 6 9-89
Packaging	Memo	0.00							MAR 08 2016
Packaging									
210	QC21- Final Inspection - Work Order Release	0.00							
210									MAR 10 2016
QC	Memo	0.00							
Quality Control									

MCS MAR 10 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause		FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Picklist Print

Tuesday, January 26, 2016 3:18:58 PM

Page 1

Work Order ID: 141028

141028

Parent Item: D2872-043

D2872-043

Parent Item Name: Nut Plate Assembly

Start Date: 1/26/2016

Required Date: 1/26/2016

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP A05.09.13New issueKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6B0.375X00.75
0

Purchased

No

180

f

15.5474

0.3125

9.868422

DAS
44
9-89

16/03/02

M6061T6B0 375X00 750

6061T6 BAR .375 x .750

**

* 134213

9.8691

Location

Loc Qty

Loc Code

MAT001

15.5474

124029

3.2604

m128483

12.287

MS20426AD4-5

Purchased

No

180

Each

2,122.000

6

180

DAS
36
9-89

16/03/09

MS20426AD4-5

RIVET

**

Location

Loc Qty

Loc Code

GA

1522

m133751

1522

ST312

600

m133751

600

180

MS21086L5

Purchased

No

100

Each

63.0000

3

90

DAS
36
9-89

16/03/09

MS21086L 5

Nut Plate

**

Location

Loc Qty

Loc Code

ST297

63

124525

13

m126274

25

m134023

25

13
25

M134201
50x

DQA: _____ Date: _____



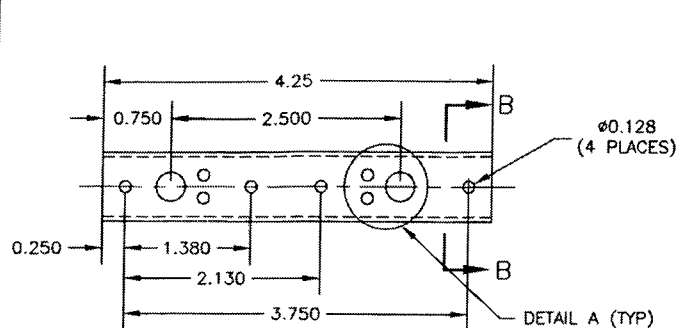
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

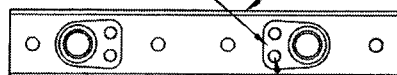
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : ☐			
Misidentified ☐		Past Due ☐					



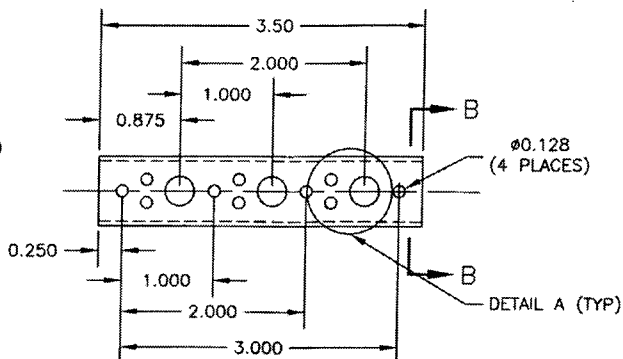
D2872-1

MS21086L5 NUT PLATE
(TYP 2 PLACES)



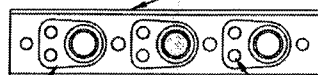
D2872-041

MS20426AD4-5
RIVET (TYP 4 PLACES)



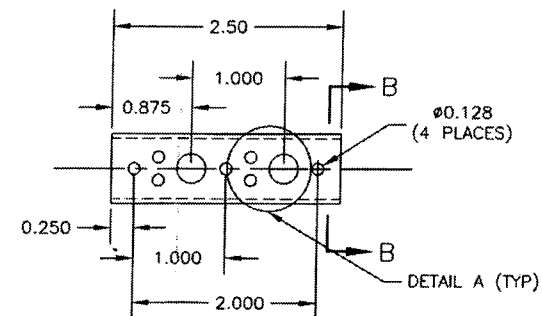
D2872-3

D2872-3



D2872-043

MS20426AD4-5
RIVET (TYP 6 PLACES)



D2872-5

MS21086L5 NUT PLATE
(TYP 2 PLACES)



D2872-045

MS20426AD4-5
RIVET (TYP 4 PLACES)

D2872-1/-3/-5 RADIUS BLOCK

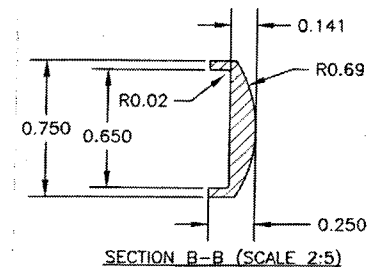
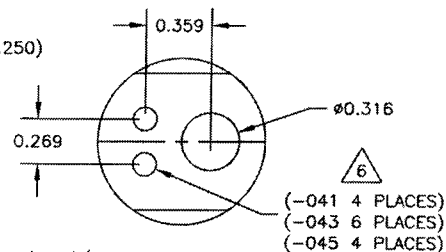
- 1) MATERIAL: 5052-H32/H34 BAR (QQ-A-225/7) (REF. DART SPEC M5052H32B0.750X00.250) OR 6061-T6 BAR (QQ-A-225/8 OR QQ-A-200/8) (REF. DART SPEC M6061T6B0.750X00.250)
- 2) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE INCHES
- 5) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 6) Ø0.128 PILOT + C'BORE CURVED SIDE Ø0.230X0.050 DEEP + C'SINK CURVED SIDE Ø0.225 x 100"

D2872-041/-043/-045 NUT PLATE ASSEMBLY

- 1) INSTALL MS21086L5 NUT PLATE IN ORIENTATION SHOWN USING MS20426AD4-5 RIVETS

D2872-041/-043/-045 NUT PLATE ASSEMBLY PARTS LIST

-041	-043	-045	PART NUMBER	DESCRIPTION
X			D2872-041	NUT PLATE ASSEMBLY
	X		D2872-043	NUT PLATE ASSEMBLY
		X	D2872-045	NUT PLATE ASSEMBLY
1			D2872-1	RADIUS BLOCK
	1		D2872-3	RADIUS BLOCK
		1	D2872-5	RADIUS BLOCK
4	6	4	MS20426AD4-5	RIVET
2	3	2	MS21086L5	NUT PLATE



NOT TO SCALE
DETAIL A (SCALE 2:5)
EX-100-1000
CONTROLLED COPY
NOT TO BE USED FOR
REVISION
141028-ML5
16-01-28

RELEASED
05.07.26

A	05.07.26	NEW ISSUE
DESIGN	PH	PH
CHECKED	DS	DS
DATE	05.07.26	TITLE
		RADIUS BLOCK
		SCALE
		4:5